



Laurentian
SETAC



Laurentian Chapter of the Society of
Environmental Toxicology and Chemistry

Southern Ontario Pub Night

**“The cost of living in the Grand
River: Energetics, stress, and epigenetics.”**
Dr. Paul Craig
University of Waterloo

When: Wed Sept. 25, 2019 , 6:30 p.m. – 8:30 p.m.

Where: Shakespeare Arms
35 Harvard Rd., Guelph

Cost: \$2 members/\$4 non-members

Join us for an engaging talk, delicious food, cozy atmosphere
and fine brew!

Please RSVP to Hossein Mehdi
[mehdih1@mcmaster.ca]

Visit our website: <http://www.laurentiansetac.ca>

Abstract

Wastewater treatment plant (WWTP) effluents are an emerging source of multiple environmental stressors of potential concern. WWTP effluents cause significant perturbations in aquatic environments, which are exacerbated by climate change related stressors, such as increased average temperatures and decreased dissolved oxygen. While effluent released pharmaceuticals and personal care products are detected at low concentrations (ng/L to µg/L range) in receiving waters, their reported impact on non-target species has been significant, as many are endocrine, neuroendocrine, and metabolic disruptors. This presentation will focus on the metabolic costs associated with wastewater effluent exposure, and link the adverse phenotypic outcomes, such as increased routine metabolic rate, with epigenetic regulators. Further, an examination of specific epigenetics markers (microRNA) released from fish exposed to multiple stressors will be discussed as a potential tool for rapid identification of stressed communities found downstream of WWTPs.